

DETAILED ACTION

Claims

Claims 1-19 are pending in the instant Office action.

Information Disclosure Statement

Acknowledgement is made of applicant's submitting an information disclosure statement on January 30, 2006. EP 0196038 was not in English and was therefore not considered. With this exception, the submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement have been considered by the examiner.

Foreign Priority

Acknowledgement is made of applicant's foreign priority claim to German patent application 10335180.9, filed July 30, 2003. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5, 10, 14 and 18-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10 provides for the use of the compounds I and II, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Dependent claim 5 and subsequent dependent claims 14, and 18-19 recite the limitation "applied simultaneously, that is jointly or separately, or in succession". Claim 5 is internally inconsistent because the parent claim, claim 1, indicates that compounds of formula I and II are in admixture. A mixture does not allow for separate or successive application of ingredients contained therein. There is insufficient antecedent basis for this limitation in the claims.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 10 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 10 provides for the use of the compounds I and II...for preparing a composition suitable for controlling *Oomycetes*, but, since the claim does not set forth

any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 10 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pees et al. (WO 98/46607, as per Applicant's IDS) by itself or alternatively in view of Cotter et al. (EP 0988790, as per Applicant's IDS).

Applicants claim a fungicidal mixture which comprises the triazolopyrimidine derivative of formula I and epoxiconazole of formula II in a synergistically effective amount.

Pees et al. teach triazolopyrimidine derivatives of formula I (instant formula I, see page 3, lines 5-15 and Example 2 on page 20 for preferred compound of instant claim 1) to have enhanced systemic activity and enhanced fungicotoxicity against rice diseases and powdery mildews (page 7, lines 8-11), namely for the control of phytopathogenic fungi (page 7 lines 13-19). As per claims 4, 8, 10, 14-16 and any claims dependent thereupon, Pees teach the control of *Phytophthora infestans* (page 23 lines 18-19). Note particularly page 17, line 7 to page 19, line 2; especially page 17, line 19-22 states, "These mixtures of fungicides can have a broader spectrum of activity than the compound of general formula I [the triazolopyrimidine] alone. Furthermore, the other fungicide can have a synergistic effect on the fungicidal activities of the compound of

general formula I." Pees discloses epoxiconazole, (page 17, line 32) as one of the possible other fungicides that can show a synergistic effect with the triazolopyrimidine derivative of question.

Pees also teaches the use of the triazolopyrimidines as a fungicidal composition comprising the triazolopyrimidine derivative in the instant application and also said triazolopyrimidine alone or in admixture with multiple active ingredients (page 12, lines 3-6 and 9-10 respectively) further comprising a liquid or solid carrier (page 12, lines 19-21), this reads on instant claims 3 and 11. Pees also discloses the method of using the above mentioned fungicidal mixture to treat the fungi, soil, peat, plants, seeds etc. (page 19, lines 3-12) which reads on instant claims 4, 6, 9, 17 and any claims dependent thereon.

Pees also teaches that the dose of fungicidal composition ranges from 0.01 to 10 kg of active ingredient per hectare (page 15, line 12). This equates to a range of 10 to 10,000 g/ha. This range of dosage amounts overlaps with the range disclosed by Applicant in claim 5, as well as the amount applied in claims 7 and 9, and 17-18 to seeds. In the case where the claimed ranges overlap or lie inside ranges disclosed by the prior art, a *prima facie* case of obviousness exists, see MPEP 2144.05. It would be within the purview of one of ordinary skill in the art to determine the necessary amounts of a particular fungicidal mixture necessary to exhibit maximum fungicidal effects in controlling harmful fungi at a particular locus of interest.

The teachings of Pees differ from the instant invention in that Pees does not explicitly teach the combination of the triazolopyrimidine with epoxiconazole, but rather

suggests the possibility of this combination from a *finite* list. However, it would have been obvious to use epoxiconazole in combination with the instant triazolopyrimidine to one of ordinary skill in the art at the time of the instant invention with a reasonable expectation of success because epoxiconazole is listed with a finite number of identified, predictable solutions.

Additionally, Cotter teaches the fungicidal properties of epoxiconazole as well as synergistic properties of epoxiconazole in combination with various triazolopyrimidines, including the triazolopyrimidine compound of the instant invention (claims 1-2, 4, wherein R¹ and R² together form C₆-alkylene). Cotter also teaches the combination of triazolopyrimidines with strobilurine derivatives as well as metconazole, propiconazole and tebuconazole (claims 2 and 3). The synergistic fungicidal mixtures taught by Cotter are effective against a broad range of phytopathogenic fungi. Examples 38-40, including Tables XXXVIII-XXXX illustrate the synergistic effect of epoxiconazole in combination with azolopyrimidine A (which differs from the instant triazolopyrimidine in the halogenation of the phenyl ring) against different fungi. Cotter also teaches that Oomycetes and fungi of the genus phytophthora can be controlled with the fungicidal mixtures (paragraphs [0015]-[0016]). Tables XXXVIII-XXXX also teach various dosage rates and ratios, the amounts of which are measured in ppm. These ratios fall within those claimed by applicants. It is within the capability of one of ordinary skill in the art to determine the necessary concentrations of a particular fungicide or fungicidal mixture necessary to exhibit maximum fungicidal effects in controlling harmful fungi.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the instant invention to combine the teachings of the two references to develop the fungicidal mixtures claimed in the instant application with a reasonable expectation for success. Pees teach that triazolopyrimidines are functional as fungicides and also show synergy when used in combination with other known fungicides. Likewise, Cotter teach that epoxiconazole is a known fungicide and it is also known to show a synergistic effect in combination with triazolopyrimidines. "It is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art." *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980).

Applicant's data in the specification has been considered. Because both Pees and Cotter show synergistic effects with triazolopyrimidines and epoxiconazole respectively in combination with a large number of other known fungicides, there is a high expectation of synergy in the instant claimed combination. It could be reasonably argued that in most cases, additive or better than additive results should be expected for the combination of such fungicides to one of ordinary skill in the art. For the reason outlined above, claims 1-19 are deemed *prima facie* obvious in light of the teachings of the prior art and rejection under 35 U.S.C. § 103 is appropriate.

Conclusion

Claims 1-19 are rejected. No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kortney Klinkel, Ph.D. whose telephone number is (571)270-5239. The examiner can normally be reached on Monday-Friday 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sharmila Landau can be reached at (571)272-0614. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KLK

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